

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Original): A seed comprising at least one set of the chromosomes of maize inbred line PH3RC, representative seed of said line having been deposited under ATCC Accession No. PTA-4672.

Claim 2 (Previously presented): A maize plant produced by growing the seed of claim 1.

Claim 3 (Original): A maize plant part of the maize plant of claim 2.

Claim 4 (Original): An F1 hybrid maize seed produced by crossing a plant of maize inbred line designated PH3RC, representative seed of said line having been deposited under ATCC Accession No. PTA-4672, with a different maize plant and harvesting the resultant F1 hybrid maize seed, wherein said F1 hybrid maize seed comprises two sets of chromosomes and one set of the chromosomes is the same as maize inbred line PH3RC.

Claim 5 (Original): A maize plant produced by growing the F1 hybrid maize seed of claim 4.

Claim 6 (Original): A maize plant part of the maize plant of claim 5.

Claim 7 (Currently amended): An F1 hybrid maize seed comprising an inbred [[corn]]maize plant cell of inbred maize line PH3RC, representative seed of said line having been deposited under ATCC Accession No. PTA-4672.

Claim 8 (Original): A maize plant produced by growing the F1 hybrid maize seed of claim 7.

Claim 9 (Currently amended): The F1 hybrid maize seed of claim 7 wherein the inbred [[corn]]maize plant cell comprises two sets of chromosomes of maize inbred line PH3RC.

Claim 10 (Original): A maize plant produced by growing the F1 hybrid maize seed of claim 9.

Claim 11 (Previously presented): A process of introducing a desired trait into maize inbred line PH3RC comprising:

- (a) crossing PH3RC plants grown from PH3RC seed, representative seed of which has been deposited under ATCC Accession No: PTA-4672, with plants of another maize line that comprise a desired trait to produce F1 progeny plants, wherein the desired trait is selected from the group consisting of waxy starch, male sterility, herbicide resistance, insect resistance, bacterial disease resistance, fungal disease resistance, and viral disease resistance;
- (b) selecting F1 progeny plants that have the desired trait to produce selected F1 progeny plants;
- (c) crossing the selected progeny plants with the PH3RC plants to produce backcross progeny plants;
- (d) selecting for backcross progeny plants that have the desired trait and the alleles of inbred line PH3RC at the SSR loci listed in Table 4 to produce selected backcross progeny plants; and
- (e) repeating steps (c) and (d) to produce backcross progeny plants that comprise the desired trait and comprise at least 95% of the alleles of inbred line PH3RC at the SSR loci listed in Table 4.

Claim 12 (Previously presented): A plant produced by the process of claim 11, wherein the plant comprises at least 95% of the alleles of inbred line PH3RC at the SSR loci listed in Table 4.

Claim 13 (New): A maize plant having all the physiological and morphological characteristics of inbred line PH3RC, wherein a sample of the seed of inbred line PH3RC was deposited under ATCC Accession Number PTA-4672.

Claim 14 (New): A process of producing maize seed, comprising crossing a first parent maize plant with a second parent maize plant, wherein one or both of the first or the second parent maize plants is the plant of claim 13, wherein seed is allowed to form.

Claim 15 (New): The maize seed produced by the process of claim 14.

Claim 16 (New): The maize seed of claim 15, wherein the maize seed is hybrid seed.

Claim 17 (New): A hybrid maize plant, or its parts, produced by growing said hybrid seed of claim 16.

Claim 18 (New): A maize seed produced by growing said maize plant of claim 17 and harvesting the resultant maize seed.

Claim 19 (New): The maize plant of claim 13, further comprising an SSR profile in accordance with the profile shown in Table 4.

Claim 20 (New): A cell of the maize plant of claim 13.

Claim 21 (New): The cell of claim 20, wherein said cell is further defined as having an SSR profile in accordance with the profile shown in Table 4.

Claim 22 (New): A seed comprising the cell of claim 20.

Claim 23 (New): The maize plant of claim 13, further defined as having a genome comprising a single locus conversion.

Claim 24 (New): The maize plant of claim 23, wherein the single locus was stably inserted into a maize genome by transformation.

Claim 25 (New): The maize plant of claim 23, wherein the locus is selected from the group consisting of a dominant allele and a recessive allele.

Claim 26 (New): The maize plant of claim 23, wherein the locus confers a trait selected from the group consisting of herbicide tolerance; insect resistance; resistance to bacterial, fungal, nematode or viral disease; yield enhancement; waxy starch; improved nutritional quality; male sterility and restoration of male fertility.

Claim 27 (New): The maize plant of claim 13, wherein said plant is further defined as comprising a gene conferring male sterility.

Claim 28 (New): The maize plant of claim 13, wherein said plant is further defined as comprising a transgene conferring a trait selected from the group consisting of male sterility, herbicide resistance, insect resistance and disease resistance.

Claim 29 (New): A method of producing a maize plant derived from the inbred line PH3RC, the method comprising the steps of:

- (a) growing a progeny plant produced by crossing the plant of claim 13 with a second maize plant;
- (b) crossing the progeny plant with itself or a different plant to produce a seed of a progeny plant of a subsequent generation;
- (c) growing a progeny plant of a subsequent generation from said seed and crossing the progeny plant of a subsequent generation with itself or a different plant; and
- (d) repeating steps (b) and (c) for an additional 0-5 generations to produce a maize plant derived from the inbred line PH3RC.

Claim 30 (New): The method of claim 29 wherein the maize plant derived from the inbred line PH3RC is an inbred maize plant.

Claim 31 (New): The method of claim 30, further comprising the step of crossing the inbred maize plant derived from the inbred line PH3RC with a second, distinct inbred maize plant to produce an F1 hybrid maize plant.

Claim 32 (New): A method for developing a maize plant in a maize plant breeding program using plant breeding techniques comprising employing a maize plant, or its parts, as a source of plant breeding material comprising using the maize plant of claim 13, or parts thereof, as a source of said breeding material.

Claim 33 (New): The method for developing a maize plant in a maize plant breeding program of claim 32 wherein plant breeding techniques are selected from the group consisting of recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

Claim 34 (New): The method of claim 33 wherein the plant breeding technique comprises the steps of:

- (a) obtaining the molecular marker profile of maize inbred line PH3RC;
- (b) obtaining an F1 hybrid seed for which maize inbred line PH3RC is a parent;
- (c) inducing doubled haploidy of the F1 hybrid seed to create progeny without the occurrence of meiotic segregation; and
- (d) selecting progeny that retain the molecular marker profile of PH3RC.